

ABSTRACT OF THE DISCLOSURE

A first separator is formed by combining a resinous passage member and a metal member together. A second separator is formed by combining a resinous passage member and a metal member together. A coolant flow field is defined between the resinous passage members such that the coolant flow field is electrically insulated from the membrane electrode assembly. The metal member includes a copper member, and the metal member includes a copper member. An outer circumferential portion of the copper member and an outer circumferential portion of the copper member are electrically connected with each other.